

REMARKS

Applicants have carefully studied the outstanding Office Action in the present application. The present response is intended to be fully responsive to all points of rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application are respectfully requested.

In the application as examined, claims 5, 8, 28 - 31, 34 - 37, 67, 69 - 70, 74, 106, 108, 113 and 118 - 123 are pending, of which claims 35 - 37, 67, 69 - 70, 74, 113 and 120 - 121 were withdrawn. Claims 1 - 4, 6 - 7, 9 - 27, 32 - 33, 38 - 66, 68, 71 - 73, 75 - 105, 107, 109 - 112 and 114 - 117 were previously cancelled.

In the present response, claims 5, 28 - 29, 31, 34 and 106 are amended. Claims 8, 30, 108, 118 - 119 and 122 - 123 are unchanged. Withdrawn claims 35 - 37, 67, 69 - 70, 74, 113 and 120 - 121 are cancelled without prejudice.

Claims 28 - 31, 5, 8 and 118 - 119 stand rejected under 35 USC 101 as being directed to non-statutory matter. Applicants have amended claim 28 to overcome the rejection.

Claims 28 - 31, 8, 106, 108, 118 - 119 and 122 - 123 stand rejected under 35 USC 102(b) as being anticipated by Brown et al. (U.S. 2001/0047485). Claim 5 stands rejected under 35 USC 103(a) as being unpatentable over Brown and in view of Shah ("Source Specific Query Rewriting and Query Plan Generation for Merging XML Based Semi-Structured Data in Mediation System").

Brown describes a security system for a computer system including one or more security domains. Access to assets registered to the security system is controlled by rights and privileges. Rights are derived from roles, and each user is assigned one or more roles. Privileges are attached to assets, and an appropriate combination of rights and privileges is required before a user is granted the specified type of access to the asset.

Shah describes a query rewriting engine including the steps of parsing an incoming query, identifying appropriate sources to be queried from among available sources, rewriting the query into source-specific sub-queries and generating a query plan for merging the results that are returned.

Applicants express appreciation to Examiner Khanh Pham for the courtesy of an interview which was granted to applicant Dr. Jair Jehuda and applicant's representative, Sanford T. Colb (Reg. No. 26,856). The interview was held at the USPTO on August 13, 2009. The substance of the interview is set forth in the Interview Summary.

At the interview, claim 106 was discussed vis-à-vis the prior art of Brown. The Interview Summary states, in relevant part, "The inventor explained the inventive concept of the invention. Discussed proposed amendment to overcome prior art of record by adding the step of generating new ontology version responsive to discovery and association of new data source with said ontology. The examiner explained his interpretation of the claimed language and suggested further amendments to the claims."

Applicants have amended claim 106 as discussed in the interview. Claim 28 is similarly amended. Claims 5, 29 and 31 are amended to provide proper antecedent basis for all elements recited therein in light of the amendments to claims 106 and 28. Claim 34 is amended to provide proper antecedent basis for all elements recited therein.

Support for the amendments to the claims is found in the following annotated version of claim 106 (all references are to paragraphs or claims of the application as published US 2006/0248045):

106. (Currently Amended) A computer software product, comprising a computer-readable medium in which program instructions are stored, which instructions, when read by a computer, cause the computer to;

receive a definition of an ontology for application to a set of diverse data sources comprising data and a definition of data access rights with respect to the ontology;~~and to control user access to the data responsively to the ontology of the data and the access rights applicable thereto~~

collect information in an ongoing manner regarding characteristics of the data sources;
[Support: claim 119; paragraphs 0108, 0138, 0144, 0182, 0184]

store said information in a computer-readable manner; [Support: paragraphs 0117, 0144]

employ at least one of wrappers and agents to automatically discover new or altered data sources associated with versions of said ontology; [Support: paragraphs 0110, 0114, 0118, 0119, 0183]

automatically generate new ontology mappings of said data sources and said data access rights to said versions of said ontology in order to accommodate said new or altered data sources, without disrupting responses to queries on the basis of earlier versions of said ontology; [Support: paragraph 0183]

automatically generate new versions of said wrappers and agents to correspond with new versions of said ontology; [Support: paragraph 0114, 0131] and

automatically generate new versions of query plans to correspond with new versions of said ontology, [Support: paragraphs 0115, 0131]

wherein said automatically generate new ontology mappings, said automatically generate new versions of said wrappers and agents and said automatically generate new versions of query plans take place without disruption of query response functionality of said product [Support: paragraph 0124, 0126, 0131].

The purpose of the present invention is to significantly enhance the volume and scope of information that can be unified and joined on demand from an ever-changing landscape of heterogeneous sources.

The prior art employs a fixed ontology for a predetermined set of sources, policies and source values. In an ever-changing landscape of sources, ontology, policies and source values, prior art solutions are rarely affordable, manageable or securable on a grand scale. Another major shortcoming of the prior art systems is that they are not equipped to start small and grow over time since every change could disrupt operation.

In these ever-changing contexts, the method and computer software product of the present invention enable large-scale solutions that are affordable, manageable and securable. The method and computer software product of the present invention also enable such solutions to start small and subsequently scale up by orders of magnitude without disrupting operations.

Thus, the emphasis of the method and product of the present invention, as recited in claims 28 and 106, respectively, is on automatic generation of new ontology mappings and automatic generation of new version of wrappers, agents and query plans corresponding to the new ontology mappings. This automatic generation allows the method and product of the present invention to accommodate change in the topology, sources and usage policies so as to provide scalability in volume and scope without disruption.

Applicants respectfully submit that amended claim 106 is patentable over the combination of Brown and Shah. Neither Brown nor Shah, either alone or in combination, show or suggest a computer software product including, inter alia, automatically generating new ontology mappings and new versions of wrappers, agents and query plans without disrupting query response functionality thereof.

Applicants submit that neither Brown nor Shah, either alone or in combination, show or suggest the computer software product of the present invention, as recited in claim 106, including a computer-readable medium in which program instructions are stored, which instructions, when read by a computer, cause the computer to, inter alia, automatically generate new ontology mappings of data sources and data access rights to versions of the ontology in order to accommodate new or altered data sources, without disrupting responses to queries on the basis of earlier versions of the ontology, automatically generate new versions of wrappers and agents to correspond with new versions of the ontology and automatically generate new versions of query plans to correspond with new versions of the ontology, wherein said automatically generate new ontology mappings, said automatically generate new versions of said wrappers and agents and said automatically generate new versions of query plans take place without disruption of query response functionality of said product, and that amended claim 106 is therefore patentable.

Applicants further submit that neither Brown nor Shah, either alone or in combination, show or suggest the method for accessing data in a computer system of the present invention, as recited in amended claim 28, including, inter alia, automatically generating new ontology mappings of data sources and data access rights to versions of an ontology in order to accommodate new or altered data sources, without disrupting responses to queries on the basis of earlier versions of the ontology, automatically generating new versions of said wrappers and agents to correspond with new versions of

said ontology and automatically generating new versions of query plans to correspond with new versions of said ontology, where the automatically generating new ontology mappings, the automatically generating new versions of said wrappers and agents and the automatically generating new versions of query plans takes place without disruption of query response functionality of the computer system, and that amended claim 28 is therefore patentable.

Claims 108 and 122 - 123 depend directly or ultimately from claim 106 and recite additional patentable subject matter and are therefore patentable. Claims 29 - 31, 118 - 119, 5, 8 and 34 each depend directly or ultimately from claim 28 and recite additional patentable subject matter and are therefore patentable.

In view of the foregoing, all of the claims are deemed to be allowable. Favorable reconsideration and allowance of the application is respectfully requested.

Dated: December 1, 2009

Respectfully submitted,

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